

Amendment and Response

Applicant: Winthrop D. Childers et al.

Serial No.: 10/634,024

Filed: Aug. 4, 2003

Docket No.: 10971935-17

Title: INK DELIVERY SYSTEM ADAPTER

REMARKS

The following remarks are made in response to the Office Action mailed August 30, 2005, in which claims 39-67 were rejected. With this Response, claims 39, 40, 43-46, 51 and 67 have been amended. Claims 39-67 remain pending in the application and are presented for reconsideration and allowance.

Double Patenting

Claims 39-67 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10-13, 15, 19, 22-24 and 29-30 of U.S. Patent No. 6,322,205 and claims 1, 2, 8, 13 and 18-20 of U.S. Patent No. 6,619,789.

As the allegedly conflicting claims have not in fact been patented, Applicant respectfully declines to file a terminal disclaimer at this time. However, in the event that conflicting claims are in fact indicated as allowable, a terminal disclaimer in compliance with 37 C.F.R. 1.321(c) will be filed to overcome the rejection.

Claim Rejections under 35 U.S.C. § 102

Claims 39-67 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are clarified as described below.

With respect to claim 39, the Office Action states the recitation "memory device" on line 3 is confusing because it is unclear if this is an additional "memory device" or further recitation of the previously claimed "memory device" and "emulator" on line 1. The Office Action further states that it is unclear how the recitation "emulator", "signal source" and "memory device" is read on the preferred embodiment. The Office Action states insofar as said elements are understood, no such device, source or emulator is seen in the drawings.

Independent claim 39 has been amended to clarify use of the term "memory device" in the preamble of the claim. Regarding the allegation that it is unclear how the emulator, signal source and memory read on the preferred embodiment, Applicants refer to the specification and figures showing and describing, for example, a signal source in Fig. 15

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(reference no. 155); Fig. 17 (reference no. 202); Fig. 18 (reference no. 211); and Fig. 19 (reference no. 219). The detailed description clearly links the signal sources as described in the application to the memory device 34, as shown in Fig. 1 of the application. For example, at page 23, lines 4-12 of the application, it is stated that “Electrical signal source 155 may be a memory circuit substantially the same as memory circuit 34 (Fig. 3) of the first embodiment. Alternately, signal source 155 may be an emulation device, which is an electronic circuit that functions similar to memory device 34 that may have a substantially different structure. As an emulation device, signal source 155 may exchange substantially the same type of information with printing system 10 (Fig. 1) as memory device 34.” In view of the above, Applicants respectfully submit that claim 39 does in fact particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Regarding claim 40, the claim language has been amended to clarify that the ink container is a refilled ink container containing a replacement ink. Regarding the Office Action’s position that it is not clear if the recitation “information” on line 2 is additional information or further recitation of “information” on lines 2 and 5 of claim 39, the Applicants respectfully submit that claim 40 describes that the electrical signal source includes “information the printing system interprets as an ink volume associated with the replacement ink”, which is clearly different than information from “a memory device mounted on a ink container containing an initial ink.” For at least this reason and with the above described amendments to claim 40, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Regarding claim 42, the Office Action states it is unclear where the “ink reservoir” comes from and how the signal source can recognize the ink reservoir since it does not have structural relationship with the ink reservoir. Applicant respectfully submits that where the ink reservoir comes from is not relevant to the claim, and further submits that the claim does not require a structural relationship between the signal source and the ink reservoir, as the signal source is linked to the controller of the printing system (see claim 39). Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

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Regarding claim 43, the Office Action states it is unclear where the “information about replacement ink supply” on line 5 comes from. Applicant respectfully submits that it is irrelevant where the information about the ink supply comes from. Rather, claim 43 clearly states that the replacement source of signals comprises an electrical signal source for exchanging such information with the controller. Accordingly, it is respectfully submitted that claim 43 does particularly point out and distinctly claim the subject matter which Applicants regard as the invention, and withdrawal of the rejection under 35 U.S.C §112, second paragraph, is respectfully requested.

In claims 44-46 and 51 the recitation “the information storage device” is said to lack clear antecedent basis. Claims 44-46 and 51 have been amended to change “information storage device” to “electrical signal source” and thereby provide proper antecedent basis for the elements in the claim. Accordingly, withdrawal of the rejection of claims 44-46 and 51 under 35 U.S.C §112, second paragraph, is respectfully requested.

In claim 45, the recitation “the volume” on line 3 has been amended to “a volume” to provide proper antecedent basis. Accordingly, withdrawal of the rejection under 35 U.S.C §112, second paragraph, is respectfully requested.

Regarding claims 52, 53, and 57, the Examiner states variously that it is unclear how the source of signals can be “configured” to be coupled to the printing system (claim 52); how the apparatus can “enable” the coupling, how the source of signals can be “located,” and how these limitations are read on the preferred embodiment or seen in the drawings (claim 53); and how the new ink supply can be “provided” (claim 57).

In each of claims 52, 53 and 57, the Applicants respectfully submit that the detailed description and figures show and describe the subject matter set forth in the claims. For example, Figs. 15 and 18 and the related portions of the description show and describe how the source of signals can be configured to be coupled to the printing system, how the apparatus enables coupling of the source of signals to the printing system, and how the new ink supply can be provided.

Regarding claims 57 and 65, the Office Action further questions how the source of signals can recognize the new ink supply since the source of signals and the ink supply do not have a structural relationship. Applicants respectfully submit that the source of signals does not need to recognize the new ink supply. Rather the source of signals and the ink supplier

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Docket No.: 10971935-17

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both coupled to the printing system (see claim 52) and it is the printing system which recognizes both the source of signals and the ink supply. Accordingly, the Applicants respectfully submit that claims 52, 53, 57, and 65 do particularly point out and distinctly claim the subject matter which the Applicant regards as the invention, and respectfully request that the rejection under 35 U.S.C §112, second paragraph, be withdrawn.

Regarding claim 67, the Office Action states the recitation “ink reservoir” on line 2 is confusing because it is unclear if this is an additional ink reservoir for further recitation of the previously claimed ink reservoir in claim 62. The Office Action further states it is not understood how the multiple couplings can be “performed” and how the signal source can be “installed”.

Claim 67 has been amended to clarify that the method further comprises successively coupling a plurality of different ink reservoirs to the fluid inlet while the signal source remains coupled to the printing system. Accordingly, the items which were found confusing in claim 67 are removed or clarified in the amended claim language and withdrawal of the rejection under 35 U.S.C §112, second paragraph is respectfully requested.

In view of the above amendments and comments, Applicants respectfully submit that each of claims 39-67 particularly points out and distinctly claims the subject matter which Applicants regard the invention, and withdrawal of the rejections under 35 U.S.C §112, second paragraph is respectfully requested.

Claim Rejections under 35 U.S.C. § 102

Claims 39, 43, 52, 59, and 62 are rejected under 35 U.S.C. §102(b) as being anticipated by Hillman et al. (U.S. Patent No. 5,365,312). As set forth in the Office Action, Hillman et al. discloses in Figs. 1 and 2 a printing device comprising, in part, a signal source or a memory (14) **attached to a replacement ink container** (11, 12) (emphasis added).

Independent claim 39 sets forth, in part, an electrical signal source **separate from the ink container** for exchanging information with the controller. As acknowledged in the Office Action, Hillman et al. discloses a memory device **attached to** the ink container. Accordingly, Hillman et al. does not and can not anticipate the subject matter of claim 39 in which the electrical signal source is **separate from** the ink container. Hillman et al. in fact teaches away from the claimed invention. For at least this reason, Hillman et al. fails to

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anticipate the subject matter of claim 39, and withdrawal of the rejection of independent claim 39 under 35 U.S.C. §102(b) is respectfully requested.

Regarding independent claim 43, the claim has been amended to make clear that the replacement source of signals comprises, in part a connector for electrically connecting the replacement source of signals to the controller **in an operation separate from any coupling of the replacement source of ink to the printing system**. Because Hillman et al. teaches that the signal source is attached to the replacement ink container, by necessity the connector for electrically connecting the memory 14 of Hillman et al. cannot connect to the source of signals in an operation separate from coupling of the replacement source of ink to the printing system. Rather, connection of the source of signals and the source of ink are inseparably linked to a single operation by virtue of the memory device being mounted on the ink reservoir. Accordingly, as amended, independent claim 43 is not anticipated by Hillman et al. and withdrawal of the rejections under 35 U.S.C §102(b) is respectfully requested.

Regarding independent claim 52, the claim sets forth, in part, that the source of signals “is configured to be coupled to the printing system separately from the ink reservoir”. As discussed above with regard to amended independent claim 43, the memory 14 of Hillman et al. is incapable of being coupled to the printing system separately from the ink reservoir, because the memory 11 is mounted directly on the ink reservoir. Accordingly, withdrawal of the rejection under 35 U.S.C §102(b) is respectfully requested.

With regard to independent claim 59, the claim sets forth in part “a source of signals including an apparatus for coupling the source of signals to the printing system separately from the ink reservoir”. As discussed above with respect to independent claims 43 and 52, the memory 14 of Hillman et al. is incapable of being coupled to the printing system separately from the ink reservoir. Accordingly, withdrawal of the rejection of claim 59 under 35 U.S.C §102(b) is respectfully requested.

With regard to independent claim 62, the claim sets forth in part “coupling the signal source to the printing system in an operation separate from any coupling of the ink reservoir to the fluid inlet.” As discussed above with respect to claims 43, 52 and 59, the memory 14 of Hillman et al. is coupled to the printing system in the same operation as the coupling of the ink reservoir of Hillman et al. Accordingly, claim 62 is not anticipated by the reference and withdrawal of the rejection under 35 U.S.C §102(b) is respectfully requested.

Amendment and Response

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Docket No.: 10971935-17

Title: INK DELIVERY SYSTEM ADAPTER

Claims 39-67 stand rejected under 35 U.S.C. §102(e) as being anticipated by Bullock et al. (U.S. Patent no. 5,812,156). Bullock et al. is alleged to disclose in Figs. 1a – 5 a printing device comprising in part, “a signal source or memory 18 separate from an ink reservoir 26.” The Office Action notes that “the memory chip 18 of Bullock et al. is a chip which is attached to the case of the ink reservoir so it is separated from the ink reservoir 26.”

With regard to independent claim 39, Applicants respectfully traverse the rejection. Claim 39 sets forth in part, an electrical signal source separate from the ink container for exchanging information with the controller. Despite the Examiner’s characterization of the reference, Bullock et al. clearly shows in Figs. 4, 4a and 5 that the memory 28 is not separate from the ink container. Rather, **the memory 28 is directly attached to the ink cartridge 20.** Accordingly, Applicants respectfully submit that Bullock et al. fails to anticipate the subject matter of independent claim 39 in which the electrical signal source is separate from the ink container. Accordingly, withdrawal of the rejection under 35 U.S.C §102(e) is respectfully requested.

With respect to independent claims 43, 52, 59 and 62, each of those independent claims set forth that the source of signals is connected to the controller in an operation separate from any coupling of the replacement source of ink to the printing system (claim 43); that the source of the source of signals is configured to be coupled to the printing system separately from the ink reservoir (claim 52); that the source of signals includes an apparatus for coupling the source of signals to the printing system separately from the ink reservoir (claim 59); and coupling the signal source to the printing system in an operation separate from any coupling of the ink reservoir to the fluid inlet (claim 62). Because the memory 28 of Bullock et al. is directly attached to the print cartridge 20, it is incapable of coupling or connecting the memory in an operation separate from the coupling of the ink reservoir to the printing system. Rather, in Bullock et al., the coupling of the ink reservoir and the memory are inseparably linked to a single operation. For at least these reasons, Bullock et al. fails to anticipate the subject matter of independent claims 43, 52, 59, and 62, and withdrawal of the rejection under 35 U.S.C §102(e) is respectfully requested.

Dependent claims 40-42, 44-51, 53-58, 60, 61 and 63-67 each depend from one of independent claims 39, 43, 52, 59 and 62. Because the independent claims are in allowable condition for at least the reasons set forth above, the claims depending therefrom are also in

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Docket No.: 10971935-17

Title: INK DELIVERY SYSTEM ADAPTER

allowable condition. Accordingly, withdrawal of the rejection of dependent claims 40-42, 44-51, 53-58, 60, 61 and 63-67 under 35 U.S.C §102(e) is respectfully requested.

CONCLUSION

In view of the above, Applicants respectfully submit that pending claims 39-67 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 39-67 is respectfully requested.

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Any inquiry regarding this Amendment and Response should be directed to either Matthew B. McNutt at Telephone No. (612) 767-2510, Facsimile No. (612) 573-2005, or Thomas A. Jolly at Telephone No. (541) 715-7331, Facsimile No. (541) 715-8581. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,

Winthrop D. Childers et al.,

By their attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 573-2000
Facsimile: (612) 573-2005

Date:

Nov. 1, 2005


MBM:dmd


Matthew B. McNutt

Reg. No. 39,766

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 1st day of November, 2005.

By



Name: Matthew B. McNutt